

Brent H Shanks

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3260004/publications.pdf>

Version: 2024-02-01

149
papers

10,601
citations

25034

57
h-index

34986

98
g-index

149
all docs

149
docs citations

149
times ranked

9621
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of inorganic salts on the primary pyrolysis products of cellulose. <i>Bioresource Technology</i> , 2010, 101, 4646-4655.	9.6	668
2	Catalytic dehydration of C ₆ carbohydrates for the production of hydroxymethylfurfural (HMF) as a versatile platform chemical. <i>Green Chemistry</i> , 2014, 16, 548-572.	9.0	523
3	Production of 5-Hydroxymethylfurfural from Glucose Using a Combination of Lewis and Brønsted Acid Catalysts in Water in a Biphasic Reactor with an Alkylphenol Solvent. <i>ACS Catalysis</i> , 2012, 2, 930-934.	11.2	455
4	Product distribution from fast pyrolysis of glucose-based carbohydrates. <i>Journal of Analytical and Applied Pyrolysis</i> , 2009, 86, 323-330.	5.5	400
5	Understanding the Fast Pyrolysis of Lignin. <i>ChemSusChem</i> , 2011, 4, 1629-1636.	6.8	399
6	Product Distribution from the Fast Pyrolysis of Hemicellulose. <i>ChemSusChem</i> , 2011, 4, 636-643.	6.8	370
7	Distinguishing primary and secondary reactions of cellulose pyrolysis. <i>Bioresource Technology</i> , 2011, 102, 5265-5269.	9.6	295
8	Design of multifunctionalized mesoporous silicas for esterification of fatty acid. <i>Journal of Catalysis</i> , 2005, 229, 365-373.	6.2	260
9	Cellulose–Hemicellulose and Cellulose–Lignin Interactions during Fast Pyrolysis. <i>ACS Sustainable Chemistry and Engineering</i> , 2015, 3, 293-301.	6.7	245
10	The deleterious effect of inorganic salts on hydrocarbon yields from catalytic pyrolysis of lignocellulosic biomass and its mitigation. <i>Applied Energy</i> , 2015, 148, 115-120.	10.1	186
11	Platform biochemicals for a biorenewable chemical industry. <i>Plant Journal</i> , 2008, 54, 536-545.	5.7	165
12	Bridging the Chemical and Biological Catalysis Gap: Challenges and Outlooks for Producing Sustainable Chemicals. <i>ACS Catalysis</i> , 2014, 4, 2060-2069.	11.2	160
13	Experimental and Mechanistic Modeling of Fast Pyrolysis of Neat Glucose-Based Carbohydrates. 1. Experiments and Development of a Detailed Mechanistic Model. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 13274-13289.	3.7	160
14	Effect of sulfur and temperature on ruthenium-catalyzed glycerol hydrogenolysis to glycols. <i>Journal of Catalysis</i> , 2005, 232, 386-394.	6.2	154
15	Active species of copper chromite catalyst in C–O hydrogenolysis of 5-methylfurfuryl alcohol. <i>Journal of Catalysis</i> , 2012, 285, 235-241.	6.2	154
16	Development of a CaO-Based CO ₂ Sorbent with Improved Cyclic Stability. <i>Industrial & Engineering Chemistry Research</i> , 2008, 47, 7841-7848.	3.7	143
17	Conversion of oils and fats using advanced mesoporous heterogeneous catalysts. <i>JAOCS, Journal of the American Oil Chemists' Society</i> , 2006, 83, 79-91.	1.9	141
18	Surfactant-Assisted Synthesis of Alumina with Hierarchical Nanopores. <i>Advanced Functional Materials</i> , 2003, 13, 61-65.	14.9	137

#	ARTICLE	IF	CITATIONS
19	Bioprivileged molecules: creating value from biomass. <i>Green Chemistry</i> , 2017, 19, 3177-3185.	9.0	137
20	Acid–base cooperativity in condensation reactions with functionalized mesoporous silica catalysts. <i>Journal of Catalysis</i> , 2009, 263, 181-188.	6.2	129
21	Oxidative Polymerization of 1,4-Diethynylbenzene into Highly Conjugated Poly(phenylene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf Materials. <i>Journal of the American Chemical Society</i> , 2002, 124, 9040-9041.	13.7	128
22	Electrocatalytic Nitrate Reduction on Oxide-Derived Silver with Tunable Selectivity to Nitrite and Ammonia. <i>ACS Catalysis</i> , 2021, 11, 8431-8442.	11.2	125
23	Kinetic Analysis of the Hydrogenolysis of Lower Polyhydric Alcohols: Glycerol to Glycols. <i>Industrial & Engineering Chemistry Research</i> , 2003, 42, 5467-5472.	3.7	124
24	Triacetic acid lactone as a potential biorenewable platform chemical. <i>Green Chemistry</i> , 2012, 14, 1850.	9.0	117
25	Effects of chloride ions in acid-catalyzed biomass dehydration reactions in polar aprotic solvents. <i>Nature Communications</i> , 2019, 10, 1132.	12.8	117
26	Paired electrocatalytic hydrogenation and oxidation of 5-(hydroxymethyl)furfural for efficient production of biomass-derived monomers. <i>Green Chemistry</i> , 2019, 21, 6210-6219.	9.0	116
27	The Alpha–Bet(a) of Glucose Pyrolysis: Computational and Experimental Investigations of 5-Hydroxymethylfurfural and Levoglucosan Formation Reveal Implications for Cellulose Pyrolysis. <i>ACS Sustainable Chemistry and Engineering</i> , 2014, 2, 1461-1473.	6.7	113
28	Hydrodeoxygenation of lignin model compounds over a copper chromite catalyst. <i>Applied Catalysis A: General</i> , 2012, 447-448, 144-150.	4.3	101
29	N- and S-doped mesoporous carbon as metal-free cathode catalysts for direct biorenewable alcohol fuel cells. <i>Journal of Materials Chemistry A</i> , 2016, 4, 83-95.	10.3	101
30	Esterification of biomass pyrolysis model acids over sulfonic acid-functionalized mesoporous silicas. <i>Applied Catalysis A: General</i> , 2009, 359, 113-120.	4.3	95
31	Development of a Novel Combined Catalyst and Sorbent for Hydrocarbon Reforming. <i>Industrial & Engineering Chemistry Research</i> , 2005, 44, 3901-3911.	3.7	94
32	A Perspective on Catalytic Strategies for Deoxygenation in Biomass Pyrolysis. <i>Energy Technology</i> , 2017, 5, 7-18.	3.8	94
33	Acidic Mesoporous Silica for the Catalytic Conversion of Fatty Acids in Beef Tallow. <i>Industrial & Engineering Chemistry Research</i> , 2006, 45, 3022-3028.	3.7	93
34	Acid strength variation due to spatial location of organosulfonic acid groups on mesoporous silica. <i>Journal of Catalysis</i> , 2006, 244, 78-85.	6.2	92
35	Pyrolysis reaction networks for lignin model compounds: unraveling thermal deconstruction of β^2 -O-4 and β^5 -O-4 compounds. <i>Green Chemistry</i> , 2016, 18, 1762-1773.	9.0	92
36	Catalytic conversion of carbohydrate-derived oxygenates over HZSM-5 in a tandem micro-reactor system. <i>Green Chemistry</i> , 2015, 17, 557-564.	9.0	91

#	ARTICLE	IF	CITATIONS
37	Cellobiose hydrolysis using organic-inorganic hybrid mesoporous silica catalysts. <i>Applied Catalysis A: General</i> , 2007, 327, 44-51.	4.3	89
38	Enhancing CO ₂ -Water Mass Transfer by Functionalized MCM41 Nanoparticles. <i>Industrial & Engineering Chemistry Research</i> , 2008, 47, 7881-7887.	3.7	87
39	Improving Hydrothermal Stability of Supported Metal Catalysts for Biomass Conversions: A Review. <i>ACS Catalysis</i> , 2021, 11, 5248-5270.	11.2	86
40	Mechanism of acetic acid esterification over sulfonic acid-functionalized mesoporous silica. <i>Journal of Catalysis</i> , 2011, 279, 136-143.	6.2	79
41	Detailed characterization of red oak-derived pyrolysis oil: Integrated use of GC, HPLC, IC, GPC and Karl-Fischer. <i>Journal of Analytical and Applied Pyrolysis</i> , 2014, 110, 147-154.	5.5	78
42	Experimental and Mechanistic Modeling of Fast Pyrolysis of Neat Glucose-Based Carbohydrates. 2. Validation and Evaluation of the Mechanistic Model. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 13290-13301.	3.7	76
43	Coupling chemical and biological catalysis: a flexible paradigm for producing biobased chemicals. <i>Current Opinion in Biotechnology</i> , 2016, 38, 54-62.	6.6	74
44	Deoxygenation of biomass pyrolysis vapors: Improving clarity on the fate of carbon. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 104, 262-280.	16.4	74
45	Kinetics of glucose dehydration catalyzed by homogeneous Lewis acidic metal salts in water. <i>Applied Catalysis A: General</i> , 2015, 498, 214-221.	4.3	73
46	Insights into the Ceria-Catalyzed Ketonization Reaction for Biofuels Applications. <i>ACS Catalysis</i> , 2013, 3, 783-789.	11.2	72
47	Investigation of Primary Reactions and Secondary Effects from the Pyrolysis of Different Celluloses. <i>ACS Sustainable Chemistry and Engineering</i> , 2014, 2, 2820-2830.	6.7	72
48	Insights into the Hydrothermal Stability of ZSM-5 under Relevant Biomass Conversion Reaction Conditions. <i>ACS Catalysis</i> , 2015, 5, 4418-4422.	11.2	72
49	Ex situ hydrodeoxygenation in biomass pyrolysis using molybdenum oxide and low pressure hydrogen. <i>Green Chemistry</i> , 2016, 18, 134-138.	9.0	72
50	Solid state NMR study of chemical structure and hydrothermal deactivation of moderate-temperature carbon materials with acidic SO ₃ H sites. <i>Carbon</i> , 2014, 74, 333-345.	10.3	67
51	Water-Compatible Lewis Acid-Catalyzed Conversion of Carbohydrates to 5-Hydroxymethylfurfural in a Biphasic Solvent System. <i>Topics in Catalysis</i> , 2012, 55, 657-662.	2.8	66
52	Probing the ruthenium-catalyzed higher polyol hydrogenolysis reaction through the use of stereoisomers. <i>Green Chemistry</i> , 2012, 14, 1635.	9.0	64
53	Upgrading of bio-oil: Effect of light aldehydes on acetic acid removal via esterification. <i>Catalysis Communications</i> , 2009, 11, 96-99.	3.3	62
54	Catalytic upgrading of the light fraction of a simulated bio-oil over CeZrO _x catalyst. <i>Applied Catalysis B: Environmental</i> , 2013, 142-143, 368-376.	20.2	61

#	ARTICLE	IF	CITATIONS
55	Effect of Mesoporosity on Thermal and Mechanical Properties of Polystyrene/Silica Composites. ACS Applied Materials & Interfaces, 2010, 2, 41-47.	8.0	59
56	Characterizing Substrate-Surface Interactions on Alumina-Supported Metal Catalysts by Dynamic Nuclear Polarization-Enhanced Double-Resonance NMR Spectroscopy. Journal of the American Chemical Society, 2017, 139, 2702-2709.	13.7	59
57	Fast pyrolysis of glucose-based carbohydrates with added NaCl part 1: Experiments and development of a mechanistic model. AIChE Journal, 2016, 62, 766-777.	3.6	57
58	Conversion of Biorenewable Feedstocks: New Challenges in Heterogeneous Catalysis. Industrial & Engineering Chemistry Research, 2010, 49, 10212-10217.	3.7	56
59	The Alpha-Bet(a) of Salty Glucose Pyrolysis: Computational Investigations Reveal Carbohydrate Pyrolysis Catalytic Action by Sodium Ions. ACS Catalysis, 2015, 5, 192-202.	11.2	56
60	cis,cis-Muconic acid isomerization and catalytic conversion to biobased cyclic-C ₆ -1,4-diacid monomers. Green Chemistry, 2017, 19, 3042-3050.	9.0	55
61	A Comparative Study of Macroporous Metal Oxides Synthesized via a Unified Approach. Chemistry of Materials, 2009, 21, 2027-2038.	6.7	54
62	Sulfated Zirconia Modified SBA-15 Catalysts for Cellobiose Hydrolysis. Catalysis Letters, 2011, 141, 33-42.	2.6	54
63	Synthesis of Hierarchically Structured Aluminas under Controlled Hydrodynamic Conditions. Chemistry of Materials, 2005, 17, 3092-3100.	6.7	51
64	Ceria calcination temperature influence on acetic acid ketonization: Mechanistic insights. Applied Catalysis A: General, 2013, 451, 86-93.	4.3	50
65	Bifunctional mesoporous organic-inorganic hybrid silica for combined one-step hydrogenation/esterification. Applied Catalysis A: General, 2010, 375, 310-317.	4.3	49
66	Sodium Ion Interactions with Aqueous Glucose: Insights from Quantum Mechanics, Molecular Dynamics, and Experiment. Journal of Physical Chemistry B, 2014, 118, 1990-2000.	2.6	49
67	Influence of alkali and alkaline earth metal salts on glucose conversion to 5-hydroxymethylfurfural in an aqueous system. Catalysis Communications, 2013, 30, 1-4.	3.3	46
68	A Combined Catalyst and Sorbent for Enhancing Hydrogen Production from Coal or Biomass. Energy & Fuels, 2007, 21, 322-326.	5.1	45
69	Effect of functionalized MCM41 nanoparticles on syngas fermentation. Biomass and Bioenergy, 2010, 34, 1624-1627.	5.7	45
70	Fast pyrolysis of glucose-based carbohydrates with added NaCl part 2: Validation and evaluation of the mechanistic model. AIChE Journal, 2016, 62, 778-791.	3.6	44
71	Improving the Stability of a CaO-Based Sorbent for CO ₂ by Thermal Pretreatment. Industrial & Engineering Chemistry Research, 2011, 50, 6933-6942.	3.7	43
72	Tuning the Location of Niobia/Carbon Composites in a Biphasic Reaction: Dehydration of d-Glucose to 5-Hydroxymethylfurfural. Catalysis Letters, 2013, 143, 509-516.	2.6	40

#	ARTICLE	IF	CITATIONS
73	Spectrally edited 2D ¹³ C/ ¹³ C NMR spectra without diagonal ridge for characterizing ¹³ C-enriched low-temperature carbon materials. Journal of Magnetic Resonance, 2013, 234, 112-124.	2.1	40
74	CeMO _x -Promoted Ketonization of Biomass-Derived Carboxylic Acids in the Condensed Phase. ACS Catalysis, 2014, 4, 512-518.	11.2	40
75	Steam Reforming of Bio-oil Fractions: Effect of Composition and Stability. Energy & Fuels, 2011, 25, 3289-3297.	5.1	38
76	Catalytic Deoxygenation of Bio-Oil Model Compounds over Acid-Base Bifunctional Catalysts. ACS Catalysis, 2016, 6, 2608-2621.	11.2	38
77	Unleashing Biocatalysis/Chemical Catalysis Synergies for Efficient Biomass Conversion. ACS Chemical Biology, 2007, 2, 533-535.	3.4	36
78	Identifying low-coverage surface species on supported noble metal nanoparticle catalysts by DNP-NMR. Chemical Communications, 2016, 52, 1859-1862.	4.1	36
79	Hydrodeoxygenation of cellulose pyrolysis model compounds using molybdenum oxide and low pressure hydrogen. Green Chemistry, 2017, 19, 3654-3664.	9.0	36
80	Aldol Condensations Using Bio-oil Model Compounds: The Role of Acid-Base Bi-functionality. Topics in Catalysis, 2010, 53, 1248-1253.	2.8	35
81	Enhancing bio-oil quality and energy recovery by atmospheric hydrodeoxygenation of wheat straw pyrolysis vapors using Pt and Mo-based catalysts. Sustainable Energy and Fuels, 2020, 4, 1991-2008.	4.9	35
82	Direct observation of macropore self-formation in hierarchically structured metal oxides. Chemical Communications, 2010, 46, 8980.	4.1	31
83	Application of a Combined Catalyst and Sorbent for Steam Reforming of Methane. Industrial & Engineering Chemistry Research, 2010, 49, 4091-4098.	3.7	31
84	Deoxygenation of wheat straw fast pyrolysis vapors over Na-Al ₂ O ₃ catalyst for production of bio-oil with low acidity. Chemical Engineering Journal, 2020, 394, 124878.	12.7	31
85	Catalysis with ceria nanocrystals: Bio-oil model compound ketonization. Applied Catalysis A: General, 2013, 464-465, 288-295.	4.3	29
86	Hydrolysis of oligosaccharides from distillers grains using organic-inorganic hybrid mesoporous silica catalysts. Bioresource Technology, 2008, 99, 5226-5231.	9.6	28
87	Effect of Electrolytes on CO ₂ -Water Mass Transfer. Industrial & Engineering Chemistry Research, 2009, 48, 3206-3210.	3.7	28
88	Stability of Pd nanoparticles on carbon-coated supports under hydrothermal conditions. Catalysis Science and Technology, 2018, 8, 1151-1160.	4.1	28
89	Bioprivileged Molecules: Integrating Biological and Chemical Catalysis for Biomass Conversion. Annual Review of Chemical and Biomolecular Engineering, 2020, 11, 63-85.	6.8	27
90	The Influence of Alkali and Alkaline Earth Metals and the Role of Acid Pretreatments in Production of Sugars from Switchgrass Based on Solvent Liquefaction. Energy & Fuels, 2014, 28, 1111-1120.	5.1	26

#	ARTICLE	IF	CITATIONS
91	A new selective route towards benzoic acid and derivatives from biomass-derived coumalic acid. <i>Green Chemistry</i> , 2017, 19, 4879-4888.	9.0	26
92	Evaluating lignin valorization <i>via</i> pyrolysis and vapor-phase hydrodeoxygenation for production of aromatics and alkenes. <i>Green Chemistry</i> , 2020, 22, 2513-2525.	9.0	25
93	Reducibility of Potassium-Promoted Iron Oxide under Hydrogen Conditions. <i>Industrial & Engineering Chemistry Research</i> , 2003, 42, 2112-2121.	3.7	24
94	Catalyst Property Effects on Product Distribution during the Hydrodeoxygenation of Lignin Pyrolysis Vapors over $\text{MoO}_3/\text{Al}_2\text{O}_3$. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 6685-6696.	6.7	24
95	Comparison of impregnation and deposition precipitation for the synthesis of hydrothermally stable niobia/carbon. <i>Applied Catalysis A: General</i> , 2014, 471, 165-174.	4.3	23
96	A Technoeconomic Platform for Early-Stage Process Design and Cost Estimation of Joint Fermentative-Catalytic Bioprocessing. <i>Processes</i> , 2020, 8, 229.	2.8	23
97	Kinetics of monosaccharide conversion in the presence of homogeneous Bronsted acids. <i>Applied Catalysis A: General</i> , 2013, 450, 237-242.	4.3	22
98	Comparison of direct and indirect contact heat exchange to improve recovery of bio-oil. <i>Applied Energy</i> , 2019, 251, 113346.	10.1	21
99	The formation of p-toluic acid from coumalic acid: a reaction network analysis. <i>Green Chemistry</i> , 2017, 19, 3263-3271.	9.0	21
100	Improved hydrothermal stability of Pd nanoparticles on nitrogen-doped carbon supports. <i>Catalysis Science and Technology</i> , 2018, 8, 3548-3561.	4.1	20
101	Computational Framework for the Identification of Bioprivileged Molecules. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 2414-2428.	6.7	20
102	Hydrothermal degradation of model sulfonic acid compounds: Probing the relative sulfur-carbon bond strength in water. <i>Catalysis Communications</i> , 2014, 51, 33-36.	3.3	19
103	Carbon nanotubes as catalysts for direct carbohydrazide fuel cells. <i>Carbon</i> , 2015, 89, 142-147.	10.3	19
104	Catalytic deoxygenation during cellulose fast pyrolysis using acid-base bifunctional catalysis. <i>Catalysis Science and Technology</i> , 2016, 6, 7468-7476.	4.1	19
105	Condensed Phase Deactivation of Solid Brønsted Acids in the Dehydration of Fructose to Hydroxymethylfurfural. <i>ACS Catalysis</i> , 2019, 9, 11568-11578.	11.2	19
106	Performance of mesoporous HZSM-5 and Silicalite-1 coated mesoporous HZSM-5 catalysts for deoxygenation of straw fast pyrolysis vapors. <i>Journal of Analytical and Applied Pyrolysis</i> , 2020, 145, 104712.	5.5	19
107	Enhancement of Pt catalytic activity in the hydrogenation of aldehydes. <i>Applied Catalysis A: General</i> , 2011, 406, 81-88.	4.3	18
108	Performance-screening of metal-impregnated industrial HZSM-5/ Al_2O_3 extrudates for deoxygenation and hydrodeoxygenation of fast pyrolysis vapors. <i>Journal of Analytical and Applied Pyrolysis</i> , 2020, 150, 104892.	5.5	18

#	ARTICLE	IF	CITATIONS
109	Manipulation of chemical species in bio-oil using in situ catalytic fast pyrolysis in both a bench-scale fluidized bed pyrolyzer and micropyrolyzer. <i>Biomass and Bioenergy</i> , 2015, 81, 256-264.	5.7	17
110	A Robust Strategy for Sustainable Organic Chemicals Utilizing Bioprivileged Molecules. <i>ChemSusChem</i> , 2019, 12, 2970-2975.	6.8	17
111	Solvent-driven isomerization of <i>cis</i> -muconic acid for the production of specialty and performance-advantaged cyclic biobased monomers. <i>Green Chemistry</i> , 2020, 22, 6444-6454.	9.0	17
112	Hydrolysis Characteristics of Tissue Fractions Resulting From Mechanical Separation of Corn Stover. <i>Applied Biochemistry and Biotechnology</i> , 2005, 125, 027-040.	2.9	16
113	Manipulation of mesoporous structure and crystallinity in spontaneously self-assembled hierarchical metal oxides. <i>Microporous and Mesoporous Materials</i> , 2010, 135, 105-115.	4.4	16
114	Tailoring the Composition of Bio-oil by Vapor-Phase Removal of Organic Acids. <i>ChemSusChem</i> , 2015, 8, 4256-4265.	6.8	16
115	The role of catalyst acidity and shape selectivity on products from the catalytic fast pyrolysis of beech wood. <i>Journal of Analytical and Applied Pyrolysis</i> , 2022, 162, 104710.	5.5	16
116	Cellulose conversion in dry grind ethanol plants. <i>Bioresource Technology</i> , 2008, 99, 5157-5159.	9.6	15
117	Characterization of the acidic sites in organic acid functionalized mesoporous silica in an aqueous media. <i>Applied Catalysis A: General</i> , 2011, 396, 76-84.	4.3	15
118	Reduction Behavior of Potassium-Promoted Iron Oxide under Mixed Steam/Hydrogen Atmospheres. <i>Industrial & Engineering Chemistry Research</i> , 2006, 45, 7427-7434.	3.7	14
119	Stability and phase transitions of potassium-promoted iron oxide in various gas phase environments. <i>Applied Catalysis A: General</i> , 2009, 354, 50-56.	4.3	14
120	Modulating Reactivity and Selectivity of 2-Pyrone-Derived Bicyclic Lactones through Choice of Catalyst and Solvent. <i>ACS Catalysis</i> , 2018, 8, 2450-2463.	11.2	14
121	Role of Cr and V on the stability of potassium-promoted iron oxides used as catalysts in ethylbenzene dehydrogenation. <i>Applied Catalysis A: General</i> , 2011, 405, 101-107.	4.3	13
122	On the selective acid-catalysed dehydration of 1,2,6-hexanetriol. <i>Catalysis Science and Technology</i> , 2014, 4, 2260.	4.1	13
123	Comparison of Fast Pyrolysis Behavior of Cornstover Lignins Isolated by Different Methods. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 5657-5661.	6.7	13
124	Micro-pyrolyzer screening of hydrodeoxygenation catalysts for efficient conversion of straw-derived pyrolysis vapors. <i>Journal of Analytical and Applied Pyrolysis</i> , 2020, 150, 104868.	5.5	13
125	Renewable Production of Nylon-6,6 Monomers from Biomass-Derived 5-Hydroxymethylfurfural (HMF). <i>Energy and Environment Focus</i> , 2016, 5, 13-17.	0.3	13
126	Copper mixed metal oxide catalysts in the hydrogenolysis of 5-methylfurfuryl alcohol. <i>Applied Catalysis A: General</i> , 2014, 470, 390-397.	4.3	12

#	ARTICLE	IF	CITATIONS
127	Synthesis and characterization of hierarchically structured aluminosilicates. <i>Journal of Materials Chemistry</i> , 2011, 21, 7364.	6.7	11
128	Simple One-Step Synthesis of Aromatic-Rich Materials with High Concentrations of Hydrothermally Stable Catalytic Sites, Validated by NMR. <i>Chemistry of Materials</i> , 2014, 26, 5523-5532.	6.7	11
129	Solvent-Independent Solid Interface of Acid Catalysts Studied by High Resolution MAS NMR. <i>Journal of Physical Chemistry C</i> , 2017, 121, 17226-17234.	3.1	11
130	Improving Selectivity of Toluic Acid from Biomass-Derived Coumalic Acid. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 12855-12864.	6.7	11
131	Insights into the scalability of catalytic upgrading of biomass pyrolysis vapors using micro and bench-scale reactors. <i>Sustainable Energy and Fuels</i> , 2020, 4, 3780-3796.	4.9	11
132	Analysis of the Amorphous and Interphase Influence of Comonomer Loading on Polymer Properties toward Forwarding Bioadvantaged Copolyamides. <i>Macromolecules</i> , 2021, 54, 7910-7924.	4.8	11
133	One-Step Hydrogenation/Esterification Activity Enhancement Over Bifunctional Mesoporous Organic-Inorganic Hybrid Silicas. <i>Topics in Catalysis</i> , 2013, 56, 1804-1813.	2.8	9
134	High activity Pd-Fe bimetallic catalysts for aqueous phase hydrogenations. <i>Molecular Catalysis</i> , 2019, 477, 110546.	2.0	8
135	Counteracting Rapid Catalyst Deactivation by Concomitant Temperature Increase during Catalytic Upgrading of Biomass Pyrolysis Vapors Using Solid Acid Catalysts. <i>Catalysts</i> , 2020, 10, 748.	3.5	8
136	Aqueous-Phase Processing of Bio-oil Model Compounds Over Pt-Re Supported on Carbon. <i>Topics in Catalysis</i> , 2012, 55, 140-147.	2.8	7
137	Deactivation and regeneration of carbon supported Pt and Ru catalysts in aqueous phase hydrogenation of 2-pentanone. <i>Catalysis Science and Technology</i> , 2020, 10, 3047-3056.	4.1	7
138	Industrial Biotechnology: An Industry at an Inflection Point. <i>Industrial Biotechnology</i> , 2020, 16, 321-332.	0.8	7
139	Bioenabled Platform to Access Polyamides with Built-In Target Properties. <i>Journal of the American Chemical Society</i> , 2022, 144, 9548-9553.	13.7	7
140	Across the Board: Brent H. Shanks. <i>ChemSusChem</i> , 2015, 8, 928-930.	6.8	6
141	Development of a Combined Catalyst and Sorbent for the Water Gas Shift Reaction. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 9570-9577.	3.7	5
142	Identification of bioprivileged molecules: expansion of a computational approach to broader molecular space. <i>Molecular Systems Design and Engineering</i> , 2021, 6, 445-460.	3.4	5
143	EXPERIMENTAL INVESTIGATIONS USING FEEDBACK-INDUCED BIFURCATION: CARBONMONOXIDE OXIDATION OVER SUPPORTED SILVER. <i>Chemical Engineering Communications</i> , 1987, 61, 127-149.	2.6	4
144	Directing Polyol Dehydration via Modification of Acid Catalysts with Metals. <i>Topics in Catalysis</i> , 2016, 59, 29-36.	2.8	4

#	ARTICLE	IF	CITATIONS
145	Hydrogenation/Hydrodeoxygenation Selectivity Modulation by Cometal Addition to Palladium on Carbon-Coated Supports. ACS Sustainable Chemistry and Engineering, 2022, 10, 7759-7771.	6.7	4
146	Application of the feedback-induced bifurcation method to a catalytic reaction system. Chemical Engineering Science, 1989, 44, 901-913.	3.8	2
147	Aqueous-Phase Processing on Multi-Functional Compounds over Platinum–Rhenium Supported on Carbon. Energy & Fuels, 2014, 28, 2123-2128.	5.1	2
148	Selective Ammonolysis of Bioderived Esters for Biobased Amide Synthesis. ACS Omega, 2021, 6, 30040-30049.	3.5	2
149	Intentional manipulation of closed-loop time delay for model validation using feedback-induced bifurcation. Chemical Engineering Science, 1989, 44, 161-170.	3.8	1